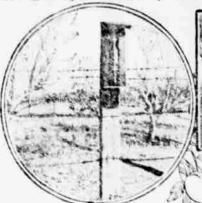
SAVING FRUIT FROM FROST





BUSINESS END OF OST ALARM, THE THERMOMETER

How up-to-date orchardists protect their crops and laugh at the ghost of bankruptcy by using smudge pots to drive away killing cold during the blossoming period : : : : :

By Robert H. Moulton



other and a greater triumph of complete h substitute for strived; samiling surress; covery of the law that grow and bring forth from hose from variouslied. Jie's Prost, may king of the frost crops has been defined of Fred growers large literally built millions of fires under him and hurned him out. Schemids nechand beating has number at possible to zuber the

acuse of a physicist enchard sent to fifdes we with as much certainty as the or can beat the city names that It takes some the saleshed and the profits of Theoretic all me surpressingly greater. Errest insurthe first crop is now like as practically Bull us certain and sastis more profitable for the to be expended then effect five or alle insurance

fusion by fire for the fruit grower makes Miletty greater profits at a much smaller expense takes against fire does for the more best of manufacturer. The first qualities automated and each that a base has been suffered street, but the deep to orchard with a remodulate and estrons

the fruit Erast's has been at the surrey of the sac togeths. The coade all his mid-inferior, all has plants all his to loss arrangements contingent on the base that the frost would have him. And before the decomment of or hard beating the claimers against him were getting worse in the frost belt. In the movern, connerval orchard, the land, machinery, labor, spraying equipment and entitivation total as heavy on investment as many monufacture his enterprises. And when two or three grops in so cession were wiped out by frest, the average grower was completely bunkrupt.

Standging or the formation of a dense blanket of smoue over the orehand, had been practiced with varying degrees of species in some parts of Europe. Orchard heating proper was first used in Californin, and the original California smidge pet is still successfully employed in many orchards. In the spring of 1910 several growers in the Grand valley of Colorado experimented with the burning of oil in simple pets of the "lard pail" type, with the result that they saved their entire crop on the heated arens and lost it on the unheated tracts. The spring of 1911 saw the adoption of the snudge pots on every fruit section of the state, and they reached the experimental stage in several other states. In the spring of 1912 there was not a fruit growing state without them, and many sections of several states were as fully equipped as Colo-

Frest fighting is not an easy job. It is necessary to have a force of men, industrious and careful and observing to the last degree. And it is no pleasant task to rush out into the still, cold darkness to drudge the better part of the night to save your own or your neighbor's orchard. In the early days of orchard heating, a man was detailed to watch the tested thermometers that were hung in different parts of the orchard and at the farmhouse some distance away from the fruit trees. If the temperature was not sinking fast, perhaps the rancher went to bed for a brief nap, setting his alasta clock to wake him at intervals through the night. Nowadays he can go to bed with a feeling of security, leaving the frost ainto thermometer to watch for him. This electric watchman has for its business end in the orchard a specially made thermometer, with a fine platinum wire fused into the mercury at the freezing point or at whatever is considered the danger point. As soon as the mercury sinks below this wire, the circuit is broken and the alarm at the head of the orchard boss bed rings out its warning. Any laterruption of the current causes the bell to ring so that if the apparatus should be put out of order it automat-

ically tells on itself. But the orchardist is usually forewarned, even before he goes to bed, and makes ready for the fraj. Late in the afternoon be notices great fleecy





chools have by from the northwest, chased by a littler wind which weens to have been intended or January, rather than the April 1990; out it is 17 and fallow from As 7 gix valves. by telephotes the everber that and gets the repty: niready down to Hilly seven in many parts of the valley and will disp to thenry degrees on the eletock it has fallen to III his alarm begins to ring. and by knows that King Frost with his by fingered warriors is murching on the camp. Steam whistles are beginning to shrick all through the valley to warm the growers of the all-night slege. Form ungtons laden with road and sel rattle past, giving evidence that the freguents who have been hoping to the fact use beginning to get their heating machiners into action. Already the early ones are firing heavily. Clouds of smoke hung low over the ryses, and the little spots of fire beneath punctuate the blackness with raps of hope,

The orchard firemen dash for the trees, a torch in one hand, and a gasoline can to aid in quick lighting in the other. Dushing a few drops of gasoline on the oil, they apply the torch, and the blaze is at work. The lighting is done as fast as the men can walk through the orchard, leaving a trail of smoke and fire behind them. In fifteen minutes each man has his tract of orchard transformed into a sen of flame under a cloud of smoke,

Then comes the first period of rest. The men gather in the packing house or barn, for lunch or smoke, making occasional trips to the thermometers to see that the fire is doing its work. By 0:30 o'clock the thermometers outside the orchard register 28, and these in the area of heat show a comfortable 37. Then the frost fighters know that the battle is half won, for keeping up the temperature is a good deal easier than raising it when it has once reached the limit, -The rest is a matter of vigilance. If the heater is of the regulated type, with enough fiel to burn through the night or longer, a few men are left to watch and open the burners wider if a later sudden fall of temperature shows that more fire is needed. If the heaters are of the uniform single-burner type, they may need to be refilled when they are nearly burned out, if the frost battalion should come back for unother charge. The ourside thermometers drop to 24, and these in the orchard stand at 20, the danger mark of the orchard frost fighter. The benters are opened wider, or refilled if burning low, and the mercury shoots up to 33. The eight degrees of frost has been driven away, and if the oil supply is plentiful, and the labor unflagging, the orchardist may now consider the buttle won. When the sun has shed his rays over the trees long enough to make the outside temperature more nearly that of the orchard, the henters are shut off by merely putting on the covers.

Heating in the spring of 1911 was much easier than that of the year before, and proved more conclusively than ever the effectiveness of the fires, The crop in the Colorado fruit area for 1911 averaged about 55 per cent. The unbgated orchards PAN TYPE OF RESERVOIR HEATER. rielded from 10 to 75 per cent of a crop, while the yield of the tected orchards was from 55 to 100

per cent, so comy that thinning was necessary in

Individual testimony to the efficiency of orchard bearing to every fruit growing state could be might plied indefinitely. Fruit crops valued at \$50 to ECA) an Hore were frequently seved ht a rest of the Conserstore of his sowers orchard from 18 to 28 degrees and produced 41 surfacts of apples.

One of the most remorkable stories of bester sur-- from Missouri. A library ordered to head police, it reside't make you a deep saller had suffered severaly from the supplier than you are son, you from some year and bud not produced a full grop woon? for 14 years. Against the advice of all wise acres. mrs from Konsite City benglir it, and H with 5000 heaters of the controlled ce in house. They have stell a crop of ... reds; audiend ar \$45,000, and it was the in that fruit growing berelovy. The act

such zere sparoximated \$300. or cost of listalling an oil beating plant is but a then for a road or wood outfit, but the in time saved and efficiency gained have result: t the most popular fuel. Oil can be obcountity at prices ranging from four to Inducat. the a gallon, and it makes a quick, strong and easily controlled heat. One man can care for from three to five acres of orehard for four or five hours and this is about as long as it will be nocesburn under ordinary frost conditions. The of the oil heaters takes from twelve cents for a simple "fard-pull" type to 45 cents for one mirolled fire area type, holding there gallone and burning at full capacity for ten or twelve hours or even longer if regulated for a smaller

MONKEY FLESH HIS ONLY MEAT.

Too proud to beg, and finding himself on the verge of starvation because of the hapoverishment of his mobile family in Europe, Count Franz Lamrinni, a rendttance man well known in Central America, went to a jungle near Managua, Nicaragun, and kept himself alive for five months by eating morkey flesh and roots and berries, according to reports to marine corps headquarters there.

A party of United States marines while on a big same hunting expedition discovered the titled foreigner and took him back to the Nicaraguan capttal.

The count, half starved and nearly mad b cause of the privation he had suffered, fought his rescuers and begged them to let him remain in the fungle, the reports say. The marines overpowered him, however, and are now attempting to nurse him back to health and redson at their commodious barracks in the American legation.

Tree Stump as Lamp-Post.

In a Pasadeun, Cal., front yard there stands an old strumore stump about ten feet high. Near the top are the stubs of two branches. The owner of the property lately conceived the idea of using the stump for a lamp post, and in the top at the end of each branch he has placed electric light builts, connected with the powerhouse in the usual way. The result has been picturesque to the extreme, especially on a very dark night.

Life's Little Worries.

Life is a tender thing and is easily moiested. There is always something that goes amiss. Vain vexations-rain sometimes, but always vexations. The smallest and slightest impediments are the most plercing; and as little letters most tire the eyes, so do little affairs most disturb us.- Mon-

To Live Long!

A recipe given by a famous physician for long life was: "Keep the kidneys in good order! Try to eliminate through the skin and intestines the poisons that otherwise clog the kidneys. Avoid cating meat as much as possible; avoid too much sait, alcohol, tea. Drink plenty of water.

For those past middle life, for those easily recognized symptoms of infiammation, as backache, scalding "water," ment I did not suffer pain and or if uric acid in the blood has caused distress. I decrered and took many difa wonderful eliminator of uric acid and Prescription. This I did, and It was discovered by Dr. Pierce of Inhelped me from the start, and it was valids' Hotel, Buffalo, N. Y. If your just a short time when I was a well druggist does not keep it send 10 cents and healthy person."—MRS. JAMES to Dr. Pierce for trial package and you HEWETT, Sol Osteopathy Ave.

will know that it is thirty seven times and the start dispersion of the start and it was a well know that it is thirty seven times.

Send Dr. Pierce, Invalids' Hotel, more potent than lithia and that it dispute the start and it was a well know that it is thirty seven times.

Send Dr. Pierce, Invalids' Hotel, more potent than lithia and that it dispute the start and it was a well know that it is thirty seven times.

Adv.

A Missouri Case

Kirksville, Mo.-"Dr. Pierce's Favorite Prescripsaved my life. For over three years I suffered with a complication womanly troubles I had displacement and other trouble. There was hardly a mo-

rheumatism, "rusty" joints, stiffness, ferent remedies without help until a get Anuric at the drug store. This is friend advised the to try Tavorite a wonderful eliminator of uric acid and Prescription. This I did, and it



Fall Run of Distemper

SPOHN MEDICAL CO., DOCTORS OF ANIMALS, GOSHEN, IND.

A fatality of uncommi took place off Buchie (Scotland) har equipment of an exploring expedition bor some days ago, and the matter was "that is setting out from Bucnos Aires afterwards centilated in court through to study a little-known region which a presecution instituted against a sol includes Mar Chiquita, a take having dier for attempted suicide. Many peo- an area of some 1,000 square miles, to ple witnessed the affair, among others cuted about 250 miles no thwest of liams. An enlocker finally jumped in explorer that with acceptance it will and rescued the drowning soldier, al. be possible to secure panoratale phothough it was stated that the latter tographs which will prove invaluable resisted. McWilliams, however, became so worked up with excitement as he viewed what was going on in the water that his nervous system gave way. He fell down in a fit and fied on the spot A peculiar feature of the matter is that the soldier was seven and subsequently prosecuted as moutioned.

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Then She Called Him a Brute. "the Jock. I expect I shall be an fully stood next," and the young wife, en she beturned from the doublet's "How's that!" asked her husband is

The jost had my window beeth

Jearwood of Livil "With their reaso the plant More wondow with have strathed to six with wise fore languist absorb. highly nonestred tion. "If you had ween north in your

COVETED BY ALL but possessed by few-a beautiful head of hair. If yours is streaked with gray or is hursh and stiff, you can restore it to its former beauty and loster by using "La Creolo" Hair Dressing. Price \$1.00 - Adv.

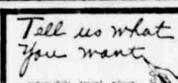
Fancy Can ne. "Your wife seems foud of dogs." "I don't think she roully is. She won't have a dog around unless be tooks more like a chrysautherous than

he does like a dog," Examine carefully every bottle of CASTORIA, a safe and sure remely for infants and children, and see that it

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Acreplanes are to be included in the a lad of tender years named McWil- Ruemos Aires. It is the belief of the in showing the topography and goography of the country. Popular Mechargies Magazine.



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If you feel that your kidneys are the cause of your sickness or run down condition commence taking Dr. Kilmer Swamp-Root, the great kidney, liver and bladder remedy, because if it proves to be the remedy you need and your kidneys begin to improve they will help all the

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Symptoms of kidney frouble.

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